

REMARKS

The Office Action mailed December 10, 2003 has been carefully reviewed and the following remarks have been made in consequence thereof.

Claims 11, 13-15, and 17-20 are pending in this application. Claims 11, 13-15, and 17-20 stand rejected. Claims 1-10, 12, and 16 have been cancelled.

The rejection of Claim 11 under 35 U.S.C. 103(a) as being unpatentable over Cairns et al. (U.S. Pat. No. 3,781,205) in view of McDonald et al. (W/O No. 98/58986) is respectfully traversed.

Cairns et al. describe a composite bearing structure including a backing member to which is secured a high tensile strength, dimensionally stable bearing surface layer. The bearing surface layer includes a solid lubricant and a plurality of fibers of a material characterized by a heat distortion temperature exceeding that of polytetrafluoroethylene (PTFE), and selected from aromatic polyamides, carbon, graphite, aromatic polysulfones, aromatic polyimides, and aromatic polyester-imides. The solid lubricant is selected from the sulfides, selenides and tellurides of molybdenum, tungsten, and titanium, lead dioxide, boron nitride, and carbon, graphite, or PTFE. At column 3, lines 43-46, Cairns et al. recites that the bearing materials may be "impregnated with a suitable resin impregnate adhesive to facilitate bonding...."

McDonald et al. describe a method of manufacturing a bearing material for use in a bearing. The method includes forming a water-based slurry including a percentage of filler material, wherein the filler material may include inorganic fibers such as glass or carbon fibers, and spreading a layer of the slurry onto a substrate to form a deposited matrix layer about which fluoro-polymer and filler materials are retained. In the exemplary embodiment, PTFE is used as the fluoro-polymer, and the filler materials may include glass or carbon fibers or polymers such as polyimide. The deposited layer, known as the bearing material layer, is then coupled to a backing and heated to cure the fluoro-polymer. In one embodiment, the deposited layer is coupled to the backing with an adhesive, and if necessary, at page 9, lines 14-17, McDonald recites that "the bearing material may require a pre-treatment such as chemical etching, plasma pre-treatment...."

Applicants respectfully submit that the Section 103 rejection of the presently pending claims is not a proper rejection. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. Neither Cairns et al. nor McDonald et al., considered alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicants respectfully submit that it would not be obvious to one skilled in the art to combine Cairns et al. with McDonald et al., because there is no motivation to combine the references suggested in the art. Additionally, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicants' own teaching. Rather, only the conclusory statement that "it would have been obvious to one of ordinary skill in the art at the time the invention, to have formed the bearings of Cairns et al. by plasma-etching the bearing layers prior to bonding..." suggests combining the disclosures.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant's disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection is based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Cairns et al. is cited for teaching a bearing element having a plurality of layers wherein at least one layer may include PTFE fibers and wherein the bearing layer may be impregnated with a resin including a polyimide, and McDonald et al. is

merely cited for its teaching of a method of manufacturing a bearing element wherein the bearing material layer may be plasma pre-treated prior to the application of an adhesive. Since there is no teaching nor suggestion in the cited art for the combination, the Section 103 rejection is clearly based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants request that the Section 103 rejection be withdrawn.

Moreover, if art “teaches away” from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited art, as a whole, is not suggestive of the presently claimed invention. Specifically, Applicants respectfully submit that McDonald et al. teaches away from Cairns et al. and the present invention, and as such, there is no suggestion or motivation to combine Cairns et al. with McDonald et al. More specifically, Cairns et al. describe a bearing structure that is not formed using a slurry layer, and rather is formed such that “the low friction bearing surfaces...can be bonded through the means of an adhesive to a suitable metal backing,” and in contrast McDonald et al. describe a bearing element that includes a slurry layer and an element which may require plasma-treating to facilitate bonding. Accordingly, McDonald et al. teaches away from Cairns et al. and as such, supports the nonobviousness of the present invention.

In addition, and to the extent understood, no combination of Cairns et al. and McDonald et al., describes or suggests the claimed invention. Specifically, Claim 11 recites a method for manufacturing a bearing element comprising the steps of “forming a plurality of layers from a combination of a first material and a second material...forming the bearing element from the plurality of layers, wherein each layer is formed from at least one of weaving materials and braiding materials...plasma etching each of the bearing element plurality of layers...impregnating each of the bearing element plurality of layers with a polyimide resin comprising polytetrafluoroethylene powder.” Specifically, no combination of Cairns et al. and McDonald et al. describes or suggests plasma etching each of the bearing element layers prior to impregnating the layers with a polyimide resin including polytetrafluoroethylene powder, wherein each of the layers is formed from at least one of weaving materials and braiding materials. Rather, in contrast to the present invention, Cairns

et al. describe a bearing structure including a backing member that is secured against a bearing surface layer with an adhesive process and as such, does not describe nor suggest plasma etching any of the layers prior to the adhesive process, and McDonald et al. describes a bearing element including a backing layer that is secured against a bearing material layer with an adhesive process such that only that specific layer is plasma pre-treated. Accordingly, no combination of Cairns et al. and McDonald et al. describes or suggests plasma etching **each** of the bearing element layers. Additionally, neither Cairns et al. nor McDonald et al. describe or suggest “impregnating **each** of the bearing element plurality of layers with a polyimide resin” as is recited in Claim 11. Rather, both Cairns et al. and McDonald et al. merely describe impregnating only the bearing layer with a polyimide resin. Accordingly, for at least the reasons set forth above, Claim 11 is submitted to be patentable over Cairns et al. in view of McDonald et al.

For the reasons set forth above, Applicant respectfully requests that the Section 103 rejection of Claim 11 be withdrawn.

The rejection of Claims 11, 13-15, 17, 19, and 20 under 35 U.S.C. § 103 as being unpatentable over Stanley et al. (GB 2,095,170) in view of Cairns et al. and McDonald et al. is respectfully traversed.

Cairns et al. and McDonald et al. are described above. Stanley et al. describe a composite article 10 in the form of a molded laminate bushing for use, for example, in a variable stator vane assembly. Bushing 10 is fabricated with a pair of outer bearing portions 12 and an intermediate lamination 14. Each lamination 12 is a compound woven fabric such as glass fibers and interwoven low friction fiber material such as PTFE fibers. Lamination 14 is a glass fiber element such as glass fiber cloth. At column 1 line 63, through column 2, line 69, Stanley et al. recite that the “low friction fiber material, in most cases, does not readily bond with the material of the body 14, and in order to assure a good bond, the bondable fibers are woven on the reverse...so that on the inner surface 17 a readily bondable surface will be provided.”

Applicants respectfully submit that the Section 103 rejection of the presently pending claims is not a proper rejection. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. None of Stanley et al., Cairns

et al., nor McDonald et al., considered alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicants respectfully submit that it would not be obvious to one skilled in the art to combine Stanley with Cairns et al. or with McDonald et al., because there is no motivation to combine the references suggested in the art. Additionally, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicants' own teaching. Rather, only the conclusory statement that "it would have been obvious to one of ordinary skill in the art at the time the invention, to have formed the bearing of Stanley et al./Cairns et al. by plasma-etching the bearing layers prior to bonding..." suggests combining the disclosures.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant's disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection is based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically, Stanley et al. is merely cited for teaching a bearing element wherein the first layer has glass fibers with Teflon, and Cairns et al. is merely cited for teaching a polyimide resin having PTFE particles, wherein the bearing layer may be impregnated with a resin including a polyimide, and McDonald et al. is merely cited for its teaching of a method of manufacturing a bearing element wherein the bearing material layer may be plasma pre-treated prior to the application of an adhesive. Since there is no teaching

nor suggestion in the cited art for the combination, the Section 103 rejection is clearly based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants request that the Section 103 rejection be withdrawn.

Moreover, if art “teaches away” from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited art, as a whole, is not suggestive of the presently claimed invention. Specifically, Applicants respectfully submit that McDonald et al. teaches away from Stanley et al., Cairns et al., and the present invention, and as such, there is no suggestion or motivation to combine Stanley et al. with either Cairns et al. or with McDonald et al. More specifically, in contrast to McDonald et al., both Stanley et al. and Cairns et al. describe a bearing structure that is not formed using a slurry layer, and both describe means to bond the bearing surfaces without the use of plasma etching. Specifically, Stanley et al. recites that the “bondable fibers are woven” to create “a readily bondable surface”, and Cairns et al. specifically recites that “the low friction bearing surfaces...can be bonded through the means of an adhesive to a suitable metal backing.” Accordingly, Applicants respectfully submit that McDonald et al. teaches away from Cairns et al. and from Stanley et al., and as such, supports the nonobviousness of the present invention.

In addition, and to the extent understood, no combination of Stanley et al., Cairns et al., and McDonald et al., describes or suggests the claimed invention. Specifically, Claim 11 recites a method for manufacturing a bearing element comprising the steps of “forming a plurality of layers from a combination of a first material and a second material...forming the bearing element from the plurality of layers, wherein each layer is formed from at least one of weaving materials and braiding materials...plasma etching each of the bearing element plurality of layers...impregnating each of the bearing element plurality of layers with a polyimide resin comprising polytetrafluoroethylene powder.” Specifically, no combination of Stanley et al., Cairns et al., and McDonald et al. describes or suggests plasma etching **each** of the bearing element layers prior to impregnating the layers with a polyimide resin including polytetrafluoroethylene powder, wherein each of the layers is formed from at least one of weaving materials and braiding materials. Rather, in contrast to the present invention, Stanley et al. describe impregnating the bearing laminate with a cured resin consisting of

epoxies and polyimides and as such does not describe nor suggest plasma etching any of the layers prior to the adhesive process, Cairns et al. describe a bearing structure including a backing member that is secured against a bearing surface layer with an adhesive process and as such does not describe nor suggest plasma etching any of the layers prior to the adhesive process, and McDonald et al. describes a bearing element including a backing layer that is secured against a bearing layer with an adhesive process such that only that specific layer is plasma pre-treated. Accordingly, no combination of Stanley et al., Cairns et al. and McDonald et al. describes or suggests plasma etching **each** of the bearing element layers as recited in Claim 11. Accordingly, for at least the reasons set forth above, Claim 11 is submitted to be patentable over Stanley et al. in view of Cairns et al. and McDonald et al.

Claims 13-15, 17, 19, and 20 depend directly or indirectly from independent Claim 11. When the recitations of Claims 13-15, 17, 19, and 20 are considered in combination with the recitations of Claim 11, Applicant submits that dependent Claim 13-15, 17, 19, and 20 likewise are patentable over Stanley et al. in view of Cairns et al. and McDonald et al.

For the reasons set forth above, Applicant respectfully requests that the Section 103 rejection of Claims 11, 13-15, 17, 19, and 20 be withdrawn.

The rejection of Claims 11, 13-15, 17, 19, and 20 under 35 U.S.C. § 103 as being unpatentable over Stanley et al. in view of McCloskey (U.S. Pat. No. 4,111,499) and McDonald et al. is respectfully traversed.

Stanley et al. and McDonald are described above. McCloskey describes a bearing liner formed of a mixture of thermosetting blended and unblended resins and particles of a self-lubricating, heat resistant plastic material, such as Teflon. The resin material is attached to a woven fabric formed of a plurality of materials including Dacron, Nomex, fiberglass, or aluminum foil. Pressure and heat are applied to cure the bearing liner and to lock the Teflon particles within the cured resin. At column 5, lines 1-3, McCloskey recites that “the Teflon particles are locked in the cured resin...the liner does not exhibit the “spring” which characterized prior art woven fabric liners.

Applicants respectfully submit that the Section 103 rejection of the presently pending claims is not a proper rejection. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some

teaching, suggestion, or incentive supporting the combination. None of Stanley et al., McCloskey, nor McDonald et al., considered alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicants respectfully submit that it would not be obvious to one skilled in the art to combine Stanley with McCloskey, or with McDonald et al., because there is no motivation to combine the references suggested in the art. Additionally, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicants' own teaching. Rather, only the conclusory statement that "it would have been obvious to one of ordinary skill in the art at the time the invention, to have formed the bearing of Stanley et al. using a polyimide resin comprising PTFE particles, in light of the teachings of McCloskey" suggests combining the disclosures.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant's disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection is based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically, Stanley et al. is merely cited for teaching a bearing element wherein the first layer has glass fibers with Teflon, McCloskey is merely cited for teaching a polyimide resin having PTFE particles, and McDonald et al. is merely cited for its teaching of a method of manufacturing a bearing element wherein the bearing material layer may be plasma pre-treated prior to the application of an adhesive. Since there is no teaching

nor suggestion in the cited art for the combination, the Section 103 rejection is clearly based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants request that the Section 103 rejection be withdrawn.

Moreover, if art “teaches away” from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited art, as a whole, is not suggestive of the presently claimed invention. Specifically, Applicants respectfully submit that McDonald et al. teaches away from Stanley et al., McCloskey, and the present invention, and as such, there is no suggestion or motivation to combine Stanley et al. with either McCloskey or with McDonald et al. More specifically, in contrast to McDonald et al., both Stanley et al. and McCloskey describe a bearing structure that is not formed using a slurry layer, and both describe means to bond the bearing surfaces without the use of plasma etching. Accordingly, Applicants respectfully submit that McDonald et al. teaches away from McCloskey and from Stanley et al., and as such, supports the nonobviousness of the present invention.

In addition, and to the extent understood, no combination of Stanley et al., McCloskey, and McDonald et al., describes or suggests the claimed invention. Specifically, Claim 11 recites a method for manufacturing a bearing element comprising the steps of “forming a plurality of layers from a combination of a first material and a second material...forming the bearing element from the plurality of layers, wherein each layer is formed from at least one of weaving materials and braiding materials...plasma etching each of the bearing element plurality of layers...impregnating each of the bearing element plurality of layers with a polyimide resin comprising polytetrafluoroethylene powder.” Specifically, no combination of Stanley et al., McCloskey, and McDonald et al. describes or suggests plasma etching **each** of the bearing element layers prior to impregnating the layers with a polyimide resin including polytetrafluoroethylene powder, wherein each of the layers is formed from at least one of weaving materials and braiding materials. Rather, in contrast to the present invention, Stanley et al. describe impregnating the bearing laminate with a cured resin consisting of epoxies and polyimides and as such does not describe or suggest plasma etching any of the layers prior to the adhesive process, McCloskey describes a bearing liner formed after a plurality of layers of materials are compressed into each other and as such does not

describe or suggest plasma etching any of the layers prior to the adhesive process, and McDonald et al. describe a bearing element including a backing layer that is secured against a bearing layer with an adhesive process such that only that specific layer is plasma pre-treated. Accordingly, no combination of Stanley et al., McCloskey et al. and McDonald et al. describe or suggest plasma etching **each** of the bearing element layers as recited in Claim 11. Accordingly, for at least the reasons set forth above, Claim 11 is submitted to be patentable over Stanley et al. in view of McCloskey and McDonald et al.

Claims 13-15, 17, 19, and 20 depend directly or indirectly from independent Claim 11. When the recitations of Claims 13-15, 17, 19, and 20 are considered in combination with the recitations of Claim 11, Applicant submits that dependent Claim 13-15, 17, 19, and 20 likewise are patentable over Stanley et al. in view of McCloskey and McDonald et al.

For the reasons set forth above, Applicant respectfully requests that the Section 103 rejection of Claims 11, 13-17, 19, and 20 be withdrawn.

The rejection of Claim 18 under 35 U.S.C. § 103 as being unpatentable over Stanley et al./Cairns et al./McDonald et al. and further in view of Viola et al. (U.S. Pat. No. 3,873,168) is respectfully traversed.

Stanley et al., Cairns et al., and McDonald et al., are described above. Viola et al. describe a washer 10 including a pair of outer bearing portions 12 and a body 14. In the preferred embodiment, body 14 is fabricated from a layer of woven glass and a pair of layers of woven graphite. Viola et al. recite that graphite fibers facilitate providing thermal insulation to washer 10. Bearing portions 12 are bonded to each side of body 14 by a resin that is impregnated in each portion 12 and body 14. In an alternative embodiment, carbon fibers replace the graphite fibers. To facilitate enhancing the life and anti-friction characteristics of the outer surface of washer 10, a coating 18 is applied to bearing portion 12.

Applicants respectfully submit that the Section 103 rejection of the presently pending claims is not a proper rejection. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. None of Stanley et al., Cairns et al., Viola et al., nor McDonald et al., considered alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office

Action, Applicants respectfully submit that it would not be obvious to one skilled in the art to combine Stanley with Cairns et al., Viola et al., or with McDonald et al., because there is no motivation to combine the references suggested in the art. Additionally, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicants' own teaching. Rather, only the conclusory statement that "it would have been obvious to one of ordinary skill in the art at the time the invention, to have formed the bearing of Stanley et al./Cairns et al./McDonald in light of the teachings of Viola et al., in order to provide a more wear resistant bearing" suggests combining the disclosures.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant's disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection is based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically, Stanley et al. is merely cited for teaching a bearing element wherein the first layer has glass fibers with Teflon, Cairns et al. is merely cited for teaching a polyimide resin having PTFE particles, Viola et al. is merely cited for teaching an outer bearing portion including graphite and carbon fibers, and McDonald et al. is merely cited for its teaching of a method of manufacturing a bearing element wherein the bearing material layer may be plasma pre-treated prior to the application of an adhesive. Since there is no teaching nor suggestion in the cited art for the combination, the Section 103 rejection is clearly based on a hindsight reconstruction in which isolated disclosures have been picked

and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants request that the Section 103 rejection be withdrawn.

Moreover, if art “teaches away” from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v. S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited art, as a whole, is not suggestive of the presently claimed invention. Specifically, Applicants respectfully submit that McDonald et al. teaches away from Stanley et al., Cairns et al., Viola et al., and the present invention, and as such, there is no suggestion or motivation to combine Stanley et al. with any of Cairns et al., Viola et al., or McDonald et al. More specifically, in contrast to McDonald et al., Stanley et al., Viola et al., and Cairns et al. each describe a bearing structure that is not formed using a slurry layer, and associated means to bond the bearing surfaces without the use of plasma etching. Specifically, both Viola et al. and Stanley et al. describe bondable fibers that are woven, and Cairns et al. specifically recites that “the low friction bearing surfaces...can be bonded through the means of an adhesive to a suitable metal backing.” Accordingly, Applicants respectfully submit that McDonald et al. teaches away from Cairns et al., Viola et al., and from Stanley et al., and as such, supports the nonobviousness of the present invention.

In addition, and to the extent understood, no combination of Stanley et al., Cairns et al., Viola et al., and McDonald et al., describes or suggests the claimed invention. Specifically, Claim 18 depends from Claim 11 which recites a method for manufacturing a bearing element comprising the steps of “forming a plurality of layers from a combination of a first material and a second material...forming the bearing element from the plurality of layers, wherein each layer is formed from at least one of weaving materials and braiding materials...plasma etching each of the bearing element plurality of layers...impregnating each of the bearing element plurality of layers with a polyimide resin comprising polytetrafluoroethylene powder.” Specifically, no combination of Stanley et al., Cairns et al., and McDonald et al. describes or suggests plasma etching **each** of the bearing element layers prior to impregnating the layers with a polyimide resin including polytetrafluoroethylene powder, wherein each of the layers is formed from at least one of weaving materials and braiding materials. Rather, in contrast to the present invention, Stanley et al. describe

impregnating the bearing laminate with a cured resin consisting of epoxies and polyimides, Cairns et al. describe a bearing structure including a backing member that is secured against a bearing surface layer with an adhesive process and as such does not suggest nor describe plasma etching any of the layers prior to the adhesive process, and McDonald et al describe a bearing element including a backing layer that is secured against a bearing layer with an adhesive process such that only that specific layer is plasma pre-treated. Accordingly, no combination of Cairns et al. and McDonald et al. describes or suggests plasma etching **each** of the bearing element layers as recited in Claim 11. Accordingly, for at least the reasons set forth above, Claim 11 is submitted to be patentable over Stanley et al. in view of Cairns et al. and Viola et al., and further in view of McDonald et al.

Claim 18 depends from independent Claim 11. When the recitations of Claim 18 are considered in combination with the recitations of Claim 11, Applicants submit that dependent Claim 18 likewise is patentable over Stanley et al. in view of Cairns et al. and Viola et al., and further in view of McDonald et al.

For the reasons set forth above, Applicant respectfully requests that the Section 103 rejection of Claim 18 be withdrawn.

The rejection of Claim 18 under 35 U.S.C. § 103 as being unpatentable over Stanley et al./McCloskey./McDonald et al. and further in view of Viola et al. is respectfully traversed.

Stanley et al., McCloskey, Viola et al., and McDonald et al., are described above. Applicants respectfully submit that the Section 103 rejection of the presently pending claims is not a proper rejection. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. None of Stanley et al., McCloskey, Viola et al., nor McDonald et al., considered alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicants respectfully submit that it would not be obvious to one skilled in the art to combine Stanley with McCloskey, Viola et al., or with McDonald et al., because there is no motivation to combine the references suggested in the art. Additionally, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicants' own teaching. Rather, only the conclusory statement that "it would have been obvious to one of ordinary skill in the art at the time the invention, to have formed the

bearing of Stanley et al./ McCloskey /McDonald in light of the teachings of Viola et al., in order to provide a more wear resistant bearing” suggests combining the disclosures.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants’ disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicant’s disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection is based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically, Stanley et al. is merely cited for teaching a bearing element wherein the first layer has glass fibers with Teflon, McCloskey is merely cited for teaching a polyimide resin having PTFE particles, and McDonald is merely cited for teaching a polyimide resin having PTFE particles, Viola et al. is merely cited for teaching an outer bearing portion including graphite and carbon fibers, and McDonald et al. is merely cited for its teaching of a method of manufacturing a bearing element wherein the bearing material layer may be plasma pre-treated prior to the application of an adhesive. Since there is no teaching nor suggestion in the cited art for the combination, the Section 103 rejection is clearly based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants request that the Section 103 rejection be withdrawn.

Moreover, if art “teaches away” from a claimed invention, such a teaching supports the nonobviousness of the invention. U.S. v. Adams, 148 USPQ 479 (1966); Gillette Co. v.

S.C. Johnson & Son, Inc., 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited are, as a whole, is not suggestive of the presently claimed invention. Specifically, Applicants respectfully submit that McDonald et al. teaches away from Stanley et al., McCloskey, Viola et al., and the present invention, and as such, there is no suggestion or motivation to combine Stanley et al. with any of McCloskey, Viola et al., or McDonald et al. More specifically, in contrast to McDonald et al., Stanley et al., Viola et al., and McCloskey each describe a bearing structure that is not formed using a slurry layer, and associated means to bond the bearing surfaces without describing or suggesting the use of plasma etching. Specifically, both Viola et al. and Stanley et al. describe bondable fibers that are woven, and McCloskey describes a bearing liner formed after a plurality of layers of materials are compressed into each other. Accordingly, Applicants respectfully submit that McDonald et al. teaches away from McCloskey, Viola et al., and from Stanley et al., and as such, supports the nonobviousness of the present invention.

In addition, and to the extent understood, no combination of Stanley et al., McCloskey, Viola et al., and McDonald et al., describes or suggests the claimed invention. Specifically, Claim 18 depends from Claim 11 which recites a method for manufacturing a bearing element comprising the steps of “forming a plurality of layers from a combination of a first material and a second material...forming the bearing element from the plurality of layers, wherein each layer is formed from at least one of weaving materials and braiding materials...plasma etching each of the bearing element plurality of layers...impregnating each of the bearing element plurality of layers with a polyimide resin comprising polytetrafluoroethylene powder.” Specifically, no combination of Stanley et al., McCloskey, and McDonald et al. describes or suggests plasma etching **each** of the bearing element layers prior to impregnating the layers with a polyimide resin including polytetrafluoroethylene powder, wherein each of the layers is formed from at least one of weaving materials and braiding materials. Rather, in contrast to the present invention, Stanley et al. describe impregnating the bearing laminate with a cured resin consisting of epoxies and polyimides and as such does not describe nor suggest plasma etching any of the layers prior to the adhesive process, McCloskey describes a bearing liner formed after a plurality of layers of materials are compressed into each other and as such does not describe nor suggest plasma etching any of the layers prior to the adhesive process, and McDonald et al. describe a bearing element including a backing layer that is secured against a bearing layer with an adhesive process such that only that specific layer is plasma pre-treated. Accordingly, no

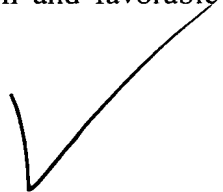
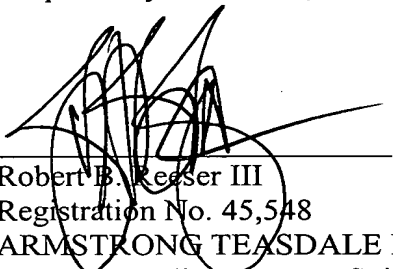
combination of Cairns et al. and McDonald et al. describes or suggests plasma etching each of the bearing element layers as recited in Claim 11. Accordingly, for at least the reasons set forth above, Claim 11 is submitted to be patentable over Stanley et al. in view of McCloskey and Viola et al., and further in view of McDonald et al.

Claim 18 depends from independent Claim 11. When the recitations of Claim 18 are considered in combination with the recitations of Claim 11, Applicants submit that dependent Claim 18 likewise is patentable over Stanley et al. in view of McCloskey and Viola et al., and further in view of McDonald et al.

For the reasons set forth above, Applicant respectfully requests that the Section 103 rejection of Claim 18 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



Robert B. Reaser III
Registration No. 45,548
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070